

What is claimed is:

1. A chip-type composite electronic component comprising:
an inductor including a plurality of ceramic layers having an internal coil conductor laminated together, and a thermistor including a plurality of ceramic layers having an internal electrode and having a predetermined resistance-temperature characteristic, said inductor and said thermistor being laminated together; and
a pair of external electrodes; wherein
at least one end of the internal coil conductor of the inductor and at least one end of the internal electrode of the thermistor are connected to the pair of external electrodes.
2. A chip-type composite electronic component according to Claim 1, wherein one end of the internal coil conductor of the inductor is connected to one of the pair of external electrode, one end of the internal electrode of the thermistor is connected to the other of the pair of the external electrode, and the other end of the internal coil conductor of the inductor and the other end of the internal electrode of the thermistor are connected together.
3. A chip-type composite electronic component according to Claim 1, wherein one end of the internal coil conductor of the inductor and one end of the internal electrode of the thermistor are connected to one of the external electrodes, and the other end of the internal coil conductor of the inductor and the other end of the internal electrode of the thermistor are connected to the other of the external electrodes.
4. A chip-type composite electronic component according to Claim 1, wherein the thermistor is a negative-characteristic thermistor.
5. A chip-type composite electronic component according to Claim 1, wherein the thermistor is a positive-characteristic thermistor.
6. A chip-type composite electronic component according to Claim 1, further comprising an intermediate insulating layer arranged such that the inductor and the thermistor are laminated via the intermediate insulating layer.

7. A chip-type composite electronic component according to Claim 1, wherein said coil conductor of each of said plurality of ceramic layers is substantially L-shaped.

8. A chip-type composite electronic component according to Claim 1, wherein said coil conductors of said plurality of ceramic layers are electrically connected to one another via through holes provided in end portions of said coil conductors.

9. A manufacturing method of a chip-type composite electronic component comprising the steps of:

forming an inductor characteristic sheet by laminating a ceramic layer having an internal coil conductor;

forming a thermistor characteristic sheet by laminating a ceramic layer having an internal electrode and having a predetermined resistance-temperature characteristic;

forming a compound multilayer body by adhering the inductor characteristic sheet and the thermistor characteristic sheet by pressure with a diffusion-prevention layer sandwiched therebetween;

baking a compound multilayer body;

forming external electrodes on an end surface of a compound multilayer body in which at least one end part of an internal coil conductor and at least one end part of an internal electrode are exposed.

10. A manufacturing method of a chip-type composite electronic component according to Claim 9, wherein one end of the internal coil conductor of the inductor is connected to one of the external electrodes, one end of the internal electrode of the thermistor is connected to the other of the external electrodes, and the other end of the internal coil conductor of the inductor and the other end of the internal electrode of the thermistor are connected together.

11. A manufacturing method of a chip-type composite electronic component according to Claim 9, further comprising the steps of connecting one end of the internal coil conductor of the inductor and one end of the internal electrode of the thermistor to one of the external electrodes, and connecting the other end of

the internal coil conductor of the inductor and the other end of the internal electrode of the thermistor to the other of the external electrodes.

12. A manufacturing method of a chip-type composite electronic component according to Claim 9, wherein the thermistor is a negative-characteristic thermistor.

13. A manufacturing method of a chip-type composite electronic component according to Claim 9, wherein the thermistor is a positive-characteristic thermistor.

14. A manufacturing method of a chip-type composite electronic component according to Claim 9, further comprising the steps of providing an intermediate insulating layer and laminating the inductor and the thermistor via the intermediate insulating layer.

15. A manufacturing method of a chip-type composite electronic component comprising the steps of:

forming an inductor characteristic sheet by laminating a ceramic layer having an internal coil conductor;

baking the inductor characteristic sheet;

forming a thermistor characteristic sheet by laminating a ceramic layer having an internal electrode and having a predetermined resistance-temperature characteristic;

baking the thermistor characteristic sheet;

forming a compound multilayer body by adhering and laminating the baked inductor characteristic sheet and the baked thermistor characteristic sheet;

forming external electrodes on an end surface of the compound multilayer body, in which at least one end part of an internal coil conductor and at least one end of an internal electrode are exposed.

16. A manufacturing method of a chip-type composite electronic component according to Claim 15, further comprising the steps of connecting one end of the internal coil conductor of the inductor is connected to one of the external electrodes, one end of the internal electrode of the thermistor to the other of the external electrodes, and connecting the other end of the internal coil conductor

of the inductor and the other end of the internal electrode of the thermistor together.

17. A manufacturing method of a chip-type composite electronic component according to Claim 15, further comprising the steps of connecting one end of the internal coil conductor of the inductor and one end of the internal electrode of the thermistor to one of the external electrode, and connecting the other end of the internal coil conductor of the inductor and the other end of the internal electrode of the thermistor to the other of the external electrode.

18. A manufacturing method of a chip-type composite electronic component according to Claim 15, wherein the thermistor is a negative-characteristic thermistor.

19. A manufacturing method of a chip-type composite electronic component according to Claim 15, wherein the thermistor is a positive-characteristic thermistor.

20. A manufacturing method of a chip-type composite electronic component according to Claim 15, further comprising the steps of providing an intermediate insulating layer and laminating the inductor and the thermistor via the intermediate insulating layer.